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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHEVALIER, ALICIA ANN

ART UNIT PAPER NUMBER

1772

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/688,357

Applicant(s)

BONKOWSKI ET AL.

Examiner

Alicia Chevalier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/21/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

RESPONSE TO AMENDMENT

1. Claims 1-5 are pending in the application.
2. Amendments to the claims, filed on February 14, 2005, have been entered in the above-identified application.

WITHDRAWN REJECTIONS

3. The 35 U.S.C. §102 rejection of claim 1 over Miekka et al. (US Patent No. 5,629,068), made of record in the Office action mailed January 19, 2005, page 3, paragraph #3 has been withdrawn due to Applicant's amendment in the response filed February 14, 2005.

REJECTIONS

4. **The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.**

Claim Rejections - 35 USC § 103

5. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miekka et al. (US Patent No. 5,629,068) in view of Coombs et al. (U.S. Patent No. 5,214,530).

Regarding Applicant's claim 1, Miekka discloses a security article (*col. 2, lines 52-55*) comprising a light transmissive substrate (*transparent cover sheet, col. 3, lines 11*) and a color optical layer (*ink layers, col. 3, lines 15-17*). The light transmissive substrate has a first surface and an opposing second surface, the first surface has a diffraction grating pattern or holographic

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image (*col. 3, lines 14-15*). The color shifting optical layer is formed on the diffraction grating pattern or holographic image such that the layer conforms to the shape of the diffraction grating pattern or holographic image pattern (*figure 1*). The color optical film comprises inks which employ pigments of metal flakes in a binder (*col. 4, lines 1-2 and lines 42-45*).

Miekka fails to disclose that the color shifting optical film comprises a first, second and third layer disposed upon each other and disposed on and conforming to the grating pattern or holographic image.

Coombs discloses an optical variable interference device, which has an observable color change at different viewing angles. The device can be utilized in optically variable interference devices or optical shifters for a thin film design. Coombs design has made it possible to achieve additional observable colors. *See column 1, lines 10-24.*

The device comprises at least a first layer of material, a second layer of material covering the first layer of material and a third layer of material covering the second layer of material (*figure 2*). The layers comprises an absorber layer, a dielectric layer, an absorber layer, a dielectric layer, a reflector, a dielectric layer, an absorber layer, a dielectric layer, and an absorber layer (*figure 2*).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the optical variable interference device of Coombs as the anti-forgery optical layer of Miekka. One of ordinary skill would be motivated to do so because Coombs would provide Miekka with additional observable colors making it harder to forge.

Therefore, the combination of Miekka and Coombs discloses a color shifting optical formed on the diffraction grating pattern or holographic image pattern comprising a first layer of

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material covering the diffraction grating pattern or holographic image and conforming to the shape thereof, a second layer of material covering the first layer of material, and a third layer of material covering the second layer of the material, wherein the second layer conforms to the shape of the first layer and wherein the third layer conforms to the shape of the second layer, such that the first, second and third layers have the hologram shape formed therein and wherein the color shifting film provides color shifting with change of viewing angle or angle of incident.

Regarding Applicant's claim 2, the combination of Miekka and Coombs discloses that the color shifting multi-layer optical film comprises an absorber layer, a dielectric layer overlying the absorber layer and a reflector layer overlying the dielectric layer (*Coombs figure 2*).

Regarding Applicant's claim 3, the combination of Miekka and Coombs discloses that the absorber layer is adjacent the first surface of the light transmissive substrate (*Coombs figure 2*).

Regarding Applicant's claim 4, the combination of Miekka and Coombs discloses that the reflector layer is adjacent the first surface of the light transmissive substrate (*Coombs figure 2*).

Regarding Applicant's claim 5, the combination of Miekka and Coombs discloses that the shaped color shifting multiplayer optical film comprises a first absorber layer, a dielectric layer overlying the absorber layer, and a second absorber layer overlying the dielectric layer (*Coombs figure 2*).

ANSWERS TO APPLICANT'S ARGUMENTS

6. Applicant's arguments in the response filed February 14, 2005 regarding the 35 U.S.C. §102 rejection over Miekka of record have been considered but are moot since the rejections have been withdrawn.

7. Applicant's arguments in the response filed February 14, 2005 regarding the 35 U.S.C. §103 rejection over Miekka in view of Coombs of record have been carefully considered but are deemed unpersuasive.

Applicant argues that Miekka does not teach or seem to consider the importance of the flakes conforming to the contours of the hologram.

The Examiner respectfully disagrees that Miekka does not teach that the color optical film, which comprises inks which employ pigments of metal flakes in a binder (*Miekka col. 4, lines 1-2 and lines 42-45*), conforms to the contours of the hologram. Miekka clearly shows in figures 1 and 2 that the optical film, reference #13 and #23, conforms to the contours of the diffraction grating or holographic image. Also, Miekka discussed attaching the optical film directly to the embossed surface (*Miekka col. 5, lines 35-36*), the diffraction grating or holographic image, and does not disclose that the optical film layer fills in the contours of the embossed surface. Furthermore, the fact that Miekka does not disclose the importance of the optical layer conforming to the diffraction grating or holographic image does not alter the fact that Miekka clearly discloses an optical layer conforming to the diffraction grating or holographic image.

Applicant further argues that the interaction between large flakes and a small grating contours, or alternatively, smaller flakes with less chroma and their interactions with binder on the grating contours, one would not be alerted to the inherent problems with such a structure.

Attorney argument is not evidence unless it is an admission, in which case, an examiner may use the admission in making a rejection. The arguments of counsel cannot take the place of evidence in the record. See MPEP § 716.01(c) for examples of attorney statements which are not evidence and which must be supported by an appropriate affidavit or declaration. MPEP 2145. Applicant has not provided any evidence of these supposed inherent problems.

Applicant argues that Coombs never contemplates applying his color shifting coating to a three dimensional grating structure or hologram and Miekka makes not suggestion of a true multi-layer coating being useful, therefore there is no motivation for one to combine the teachings of Coombs and Miekka.

One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Furthermore, both Coombs and Miekka are concerned with optical films that produce visible color changes and the motivation to combine is because Coombs would provide Miekka with additional observable colors making it harder to forge, see above.

Applicant argues that the fact that Miekka has a much later date than Coombs and makes no suggestion of using Coombs this film layers to cover and take on the impression of a hologram would lead reader in a very different direction.

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Applicant's argument based upon the age of the references, contentions that the reference patents are old are not impressive absent a showing that the art tried and failed to solve the same problem notwithstanding its presumed knowledge of the references. The fact that Miekka was later filed and does not use a multi-layer film similar to Coombs does not alter the ability for one skilled in the art to recognize the advantage which would flow naturally from following the suggestion of the prior art.

Applicant argues that the genesis of their invention is in the discovery that Miekka's flakes do not conform to the contours of the grating and that this is problematic and that the background of the instant application points out the problems with Miekka and that neither Miekka nor Coombs suggest this and the combining the references would not yield the instant invention.

Applicant's specification discusses the Miekka reference and other Miekka references on page 4, lines 1-6. Applicant's specification does not discuss this supposed problem of flakes not conforming to the contours of the grating. It merely recites "one approach, as disclosed in U.S. Patents Nos. 5,629,068 and 5,549,774 to Miekka et al., is the applications of inks, such as metallic flake inks, metallic effect inks, or inks with pigments formed of optical stacks, upon the embossed surface in lieu of a thin metal layer." As stated above Applicant has not provided any evidence of these supposed inherent problems. Furthermore, it does not appear from the specification that Applicant believes that there were any problems with Miekka since they refer to it as a "more advanced security measure[s]," page 4, line 1.

The Examiner acknowledges that neither Coombs or Miekka alone teach the instant claimed invention. However, as shown above in the rejection over Miekka and Coombs they do teach every limitation in the instant claimed invention.

Applicant argues that in one embodiment of this invention, a color shifting holographic structure is provided which yields far superior results to that of Miekka.

Applicant has not provided any evidence that their claimed invention results in far superior results than that of Miekka. Furthermore, this argument is not commensurate in scope with the claimed invention, since at least claim 1 does not recite all the elements from any of the embodiments disclosed in the specification. In all instances in the specification where it refers to what the optical film comprises, the film comprises at least an absorber layer, a dielectric layer and a reflector layer (*specification page 5, lines 16-19 and page 10, lines 16-17*), not just three non-descript layers.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (571) 272-1490. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink that reads "Alicia Chevalier". The signature is written in a cursive, flowing style.

Alicia Chevalier

5/30/05